SANTA CRUZ BIOTECHNOLOGY, INC.

TYW5 (F-1): sc-390673

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Chromosome 2, the second largest human chromosome, consists of 237 million bases encoding over 1,400 genes, comprising approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome is due to mutations in the ALMS1 gene. Interestingly, chromosome 2 contains what appears to be a vestigial second centromere and vestigial telomeres, which gives credence to the hypothesis that human chromosome 2 is the result of an ancient fusion of two ancestral chromosomes seen in modern form today in apes.

REFERENCES

1. Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. Proc. Natl. Acad. Sci. USA 88: 9051-9055.
2. Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. Hum. Genet. 89: 247-249.
3. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
4. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.
5. Akiyama, M., et al. 2007. Compound heterozygous ABCA12 mutations including a novel nonsense mutation underlie harlequin ichthyosis. Dermatology 215: 155-159.

CHROMOSOMAL LOCATION

Genetic locus: TYW5 (human) mapping to 2q33.1; Tyw5 (mouse) mapping to 1 C1.3.

SOURCE

TYW5 (F-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 7-36 of TYW5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TYW5 (F-1) is available conjugated to agarose (sc-390673 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390673 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390673 PE), fluorescein (sc-390673 FITC), Alexa Fluor® 488 (sc-390673 AF488), Alexa Fluor® 546 (sc-390673 AF546), Alexa Fluor® 594 (sc-390673 AF594) or Alexa Fluor® 647 (sc-390673 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390673 AF680) or Alexa Fluor® 790 (sc-390673 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390673 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TYW5 (F-1) is recommended for detection of TYW5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TYW5 siRNA (h): sc-94863, TYW5 siRNA (m): sc-108179, TYW5 shRNA Plasmid (h): sc-94863-SH, TYW5 shRNA Plasmid (m): sc-108179-SH, TYW5 shRNA (h) Lentiviral Particles: sc-94863-V and TYW5 shRNA (m) Lentiviral Particles: sc-108179-V.

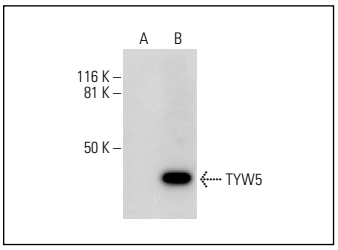
Molecular Weight of TYW5 isoform 1/2: 37/18 kDa.

Positive Controls: TYW5 (h2): 293T Lysate: sc-372913 or HeLa whole cell lysate: sc-2200.

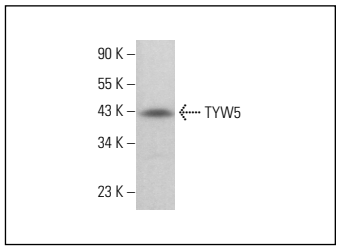
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TYW5 (F-1): sc-390673. Western blot analysis of TYW5 expression in non-transfected: sc-117752 (**A**) and human TYW5 transfected: sc-372913 (**B**) 293T whole cell lysates.



TYW5 (F-1): sc-390673. Western blot analysis of TYW5 expression in HeLa whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.